

**Abstract**

The invention involves identification of a mechanism of  $\beta$ -amyloid peptide cytotoxicity, which enables treatment of conditions caused by  $\beta$ -amyloid peptide aggregates by administration of compounds which antagonize the mechanism of cytotoxicity. The invention includes the identification and isolation of compounds which can antagonize the aggregation of  $\beta$ -amyloid peptides and the neurotoxic effects of such aggregates. The compounds include isolated peptides which were selected for their ability to form a complex with a  $\beta$ -amyloid peptide, or are derived from peptides so selected. Methods for treating conditions resulting from neurotoxic  $\beta$ -amyloid peptide aggregates and pharmaceutical preparations are provided. Also provided are methods for selecting additional compounds which can antagonize the aggregation of  $\beta$ -amyloid peptides and the neurotoxic effects of such aggregates.

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